



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

120388-000

EC12-K

#1

MAY 5 2000

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RETURN RECEIPT REQUESTED

REF: 4WM-GWDW

Mr. Aldo A. Morell
Plant Manager
DuPont White Pigment & Mineral Products
DeLisle Plant
P.O. Box 430
Pass Christian, MS 39571

BCC: M.M. Ramirez, Spec. Chem. RO-Houston
Phil Papadeas, Sandia Technologies, LLC: RO-Houston
Guy Johnson, DuPont Legal - Wilm
Gregg Martin - BARLML, Bldg 36
James E. Clark, Beaumont
H.A. Walter-Terrinoni
Doug Lottes
Vic Stroud
B.F. Faust
G.A. Martz
Aldo Morell
Ed Ramos

EC12-K

Dear Mr. Morell:

Effective the date of this letter, the U.S. Environmental Protection Agency (EPA) approves the request of E. I. Du Pont de Nemours & Company, Inc. (DuPont) for exemption to the land disposal restrictions imposed by the Hazardous and Solid Waste Amendments of 1984 of the Resource Conservation and Recovery Act. This approval is for injection well operations in Plant Wells 2, 3, 4, 5, and 6 at the DuPont White Pigment & Mineral Products facility in DeLisle, Mississippi.

The land disposal restrictions prohibit the injection of hazardous waste unless a petitioner can demonstrate to EPA, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the injection zone for as long as the wastes remain hazardous. The land disposal restrictions for injection wells codified in 40 CFR Part 148, provide the standards and procedures by which petitions to dispose of an otherwise prohibited waste by injection will be reviewed and by which exemptions pursuant to these petitions will be granted or denied.

A letter dated March 7, 2000, informed DuPont that EPA was proposing to approve the DuPont petition request for an exemption to the land disposal restrictions. The public comment period associated with this proposed decision began on February 29, 2000, and closed on April 13, 2000.

The only comments that EPA received during the public comment period were contained in a letter, dated April 7, 2000, from DuPont to EPA. The comments concerned three of the proposed petition approval conditions contained in the February 29, 2000, Fact Sheet that was included with EPA's March 7, 2000, proposed petition approval letter.

The first comment concerned the injection interval and injection zone depths contained in proposed condition #1. DuPont proposed that the word "approximate" be used in conjunction with these depths since the distance from the Rig Kelly Bushing (RKB) to ground surface varies from well to well and because of accuracy limitations with gauge measurements for deep wells. In response to this comment, EPA is aware that accuracy limitations of gauge measurements in wells can cause depth readings that vary by a few feet for different logging runs in the same well. The variation of the RKB elevation between wells should not be important since each well's depths should be referenced only to its own RKB as measured from each well's ground surface elevation. However, the RKB elevation can vary with different rig set ups on the same well. The depths listed in proposed condition #1 were not referenced to specific, dated well logs by which to ascertain the specific RKB for those depths. Therefore, EPA agrees that the referenced depths listed in condition #1 should be listed as approximate.

DuPont's second comment concerned proposed condition #3's stipulation for cessation of injection by December 31, 2020. DuPont stated that it has not decided to cease injection by this date and recommends that the language in the condition be changed to read that the exemption itself expires on December 31, 2020. EPA established the date for cessation of injection in proposed condition #3 based on this date being provided by DuPont within the no migration demonstration petition. The importance of this date is that it represents the termination of the time frame upon which the injection modeling was based. To inject beyond this date with the existing petition parameters would invalidate the modeling and therefore the petition approval. 40 C.F.R. §148.20(e) allows for the modification of "any conditions placed on the exemption" with the appropriate demonstration. This would include the date of cessation for injection in condition #3 should DuPont decide to extend the time frame of injection operations at the DeLisle facility. Therefore, EPA does not agree to change the language in this condition.

DuPont's third comment concerned proposed condition #12, which required the submission of a pressure test to re-establish mechanical integrity after a well workover in Plant Well #3. DuPont has submitted the pressure test with its comment letter, and this test indicates the well has mechanical integrity. Therefore, EPA is removing proposed condition #12 from the final approval conditions.

Based on a detailed technical review of the submitted petition and support documents, EPA has determined that this information for the DuPont facility meets the requirements of 40 CFR Part 148 by demonstrating no migration of hazardous constituents from the injection zone for at least 10,000 years. The following are conditions of this land disposal restriction exemption:

Petition Approval Conditions

The approval to allow injection of restricted hazardous wastes is subject to the following conditions, which are necessary to assure that the standard in 40 CFR §148.20(a) is met. Noncompliance with any of these conditions is grounds for termination of the exemption in

accordance with 40 CFR §148.24(a)(1). This exemption only applies to Plant Wells 2, 3, 4, 5, and 6.

1. Injection of restricted waste shall be limited to the following approximate intervals in the wells:

Plant Well No. 2	9,779 to 10,018 feet RKB
Plant Well No. 3	9,797 to 10,043 feet RKB
Plant Well No. 4	9,754 to 10,023 feet RKB
Plant Well No. 5	9,746 to 10,043 feet RKB
Plant Well No. 6	(See Condition 10)

These intervals occur in an injection zone occurring at the following approximate depths in the wells:

Plant Well No. 2	8,025 to 10,043 feet RKB
Plant Well No. 3	8,045 to 10,043 feet RKB
Plant Well No. 4	8,003 to 10,023 feet RKB
Plant Well No. 5	8,003 to 10,043 feet RKB
Plant Well No. 6	(See Condition 10)

2. The cumulative volume injected in each of Plant Wells 2, 3, 4, 5, and 6 during any given month shall not exceed that calculated by multiplying the injection rate (gpm) X 60 minutes per hour X 24 hours per day X the number of days in that month. The appropriate injection rate should be determined from the following table; however, the combined rate of any combination of wells at any one time shall not exceed 2200 gpm.

<u>Plant Well</u>	<u>Injection Rate (gpm)</u>
2	550
3	550
4	550
5	1000
6	550

3. The facility shall cease injection by December 31, 2020.
4. The characteristics of the injected waste stream shall at all times conform to those of Section 3.3 in the petition. The density of the waste stream shall remain within a range of from 1.05 to 1.35 g/cc inclusive, as measured at 70° F and 14.7 psi.
5. The proposed approval for injection is limited to the hazardous constituents identified by wastes codes found on the attached Table 1.


6. The facility must petition for approval to inject additional hazardous wastes which are not included in Condition No. 5, above. The facility must also petition for approval to increase the concentration of any waste which would necessitate the recalculation of the limiting concentration reduction factor and the extent of the waste plume. The facility must also petition for approval prior to any alteration of the characteristics of the injected waste stream that would invalidate the basis for the existing approval of this petition. Petition reissuances or modifications shall be made pursuant to 40 CFR §148.20 (e) or (f).
7. The results of the bottom hole pressure survey for the injection interval shall be submitted annually to EPA. The survey shall have been performed after shutting in the well to be tested for a period of time sufficient to allow the pressure in the injection interval to reach equilibrium, in accordance with 40 CFR §146.68(e)(1). This annual report should include a comparison of reservoir parameters determined from the falloff tests with parameters used in the approved no migration petition.
8. Upon the expiration, cancellation, reissuance, or modification of the Mississippi Department of Environmental Quality (MDEQ) permit for Plant Wells 2, 3, 4, and 5 or upon the issuance, expiration, cancellation, reissuance, or modification of a MDEQ permit for Plant Well 6, this exemption is subject to review. A new demonstration may be required if information shows that the basis for granting the exemption is no longer valid.
9. Plant Well 6 must meet the requirements of the MDEQ injection permit. Results of the pressure and radioactive tracer tests must be submitted to EPA Region 4 for approval. If this and other conditions listed below for Plant Well 6 are approved, the exemption will become effective and EPA authorization to begin injection of restricted hazardous waste in Plant Well 6 will be issued.
10. Information obtained from the drilling and construction of proposed Plant Well 6 shall be submitted to EPA Region 4 to ensure the basis for the petition approval continues to remain valid. The information will be used to determine the specific depths for the injection zone and injection interval. The approximate depths for Plant Well 6 are from 9,700 to 10,100 feet (RKB) for the injection interval and from 8,000 to 10,100 feet (RKB) for the injection zone. The submitted information should include well logs and formation tests and may include geologic core analysis of the confining and injection zones and a hydrogeologic compatibility determination.
11. Drilling mud used in the drilling process of Plant Well 6 shall be disposed of properly.

In addition to the above conditions, this petition approval is contingent on the validity of the information submitted in the DuPont DeLisle facility petition for an exemption to the land

disposal restrictions. This approval is subject to termination in accordance with 40 CFR §148.24. EPA will be publishing public notice of this decision in an upcoming Federal Register notice.

We appreciate the cooperation shown by you and your staff during the petition process. If you have any questions or comments regarding this matter, please call Mr. Larry Meyer at (404) 562-9449.

Sincerely,


John H. Hankinson, Jr.
Regional Administrator

Enclosure

cc: E. Ramos, DuPont
J. Crawford, MDEQ

Table 1**DuPont DeLisle Hazardous Waste Codes**

<u>Waste Code</u>	<u>Compound</u>
D002	Corrosive
D004	Arsenic
D005	Barium
D006	Cadmium
D007	Chromium
D008	Lead
D009	Mercury
D010	Selenium
D011	Silver

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#2

CERTIFIED MAIL
RETURN RECEIPT REQUEST



JAN 23 2015

Mr. Ed G. Ramos
DuPont Titanium Technologies
P.O. Box 430
7685 Kiln DeLisle Road
Pass Christian, Mississippi 39571

Subject: DuPont Titanium Technologies (DuPont), DeLisle Plant, Application to Modify
Existing Land Ban Exemption Petition

Dear Mr. Ramos:

Effective the date of this letter, the U.S. Environmental Protection Agency Region 4 approves DuPont's application to modify the existing Land Ban Exemption Petition which was originally approved by the EPA in May 2000. The DeLisle Plant is located on the north shore of St. Louis Bay in Harrison County, Mississippi. The EPA reviewed the following three changes to the existing Land Ban Exemption Petition.

- Relocation of DeLisle Plant Well No. 6 (never constructed).
- The injection rate for DeLisle Plant Well No. 6 to be increased from 550 to 1,200 gpm.
- An unconventional well construction (i.e., fiberglass reinforced expansion joints and epoxy cement) for DeLisle Plant Well No. 6.

During the EPA's evaluation of DuPont's application to modify the existing Land Ban Exemption Petition, we reviewed the existing data and information from the original Land Ban Exemption Petition dated June 1995. The plume configurations from the original petition and the revision request were evaluated through the year 2020 (the date when the current petition expires) and the 10,000-year migration modeling. The pressure increase due to higher injection volume and relocating Well #6 was evaluated from both the original and proposed revised petition ending in 2020. We determined that the pressure increase and well relocation have negligible effects and do not result in the plume extending significantly either horizontally or vertically beyond its location in the original petition.

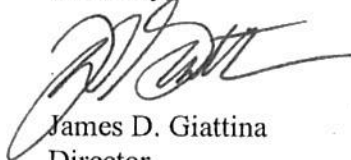
The EPA reviewed the results for compatibility testing on the waste stream produced at the DeLisle Plant with two different resins, EPSEAL® and WellLock (R1 and H1)™. The original construction plan included fiberglass reinforced expansion joints. However, as stated in the DuPont letter dated October 21, 2013, the fiberglass reinforced expansion joints will not be used in the well construction of Well #6. Previously, DuPont used EPSEAL® in its injection well construction. DuPont has proposed to use

WellLock™ resin for future construction. DuPont submitted the "Chemical Stability of WellLock™ resin to FeCl₃/HCL Waste Fluid" (WellLock Report), using ASTM D 543-06, "Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents", and the actual testing was conducted by Halliburton Company on March 5, 2013. The ASTM D 543-06 standards outline a seven (7) day sampling period and the WellLock Report used a twenty-eight (28) day sampling period. Based on the testing results submitted to the EPA using ASTM D 543-06, the use of WellLock™ resin in the construction of Well #6 would not be affected by the FeCl₃/HCL waste stream produced by the DeLisle Plant.

Based on the Underground Injection Control regulations, Guidance Document #74 ("Modification of Class I Hazardous Injection Well No-Migration Exemptions – Underground Injection Control Program") criteria and our review of all pertinent information submitted by DuPont, the EPA has determined that DuPont's petition modification request meets the requirements of 40 C.F.R. Part 148 and qualifies as a revision and reissuance will not be required. In addition, no comments were received in response to the August 24, 2014, public notice of our intent to approve the modification. Therefore, DuPont's request for a modification of the existing Land Ban Exemption Petition is approved.

If you have any questions concerning the enclosed procedures associated with the Land Ban Exemption Petition, please contact us at the above address or by calling Mr. James Ferreira at (404) 562-9399.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Giattina", is written over the printed name.

James D. Giattina

Director

Water Protection Division

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JUN 06 2016

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RETURN RECEIPT REQUESTED

Mr. Eduardo Ramos
Senior Consultant, Environmental
DeLisle Plant
The Chemours Company FC, LLC
7685 Kiln DeLisle Road
Pass Christian, Mississippi 39571

Re: Request for administrative modification of DeLisle Plant HSWA landban exemption

Dear Mr. Ramos:

This letter is in response to your May 5, 2016, notification of ownership change for injection wells 2, 3, 4, 5, and 6 at the former DuPont White Pigment & Mineral Products facility in DeLisle, Mississippi. The name change is from E. I. Du Pont De Nemours and Company to The Chemours Company FC, LLC which occurred on May 19, 2015. The Environmental Protection Agency has determined that this change does not affect the approved petition demonstration and is a nonsubstantive revision. Therefore, the EPA has modified its files to reflect the ownership change mentioned above. The approval conditions of the EPA's May 5, 2000, petition issuance and the January 23, 2015, modification provisions are still in effect.

If you have any questions or comments please contact Richie Hall at (404) 562-8067.

Sincerely,

James D. Giattina
Director
Water Protection Division

